Venjix : **Blood Bank Management System**

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1) Detailed Project Description:

A computerized system called the "Blood Bank Management System" developed by our team is utilized to store and retrieve data on blood donations and inventories. The project's objective is to highlight the usefulness and significance of blood bank management systems.

The system enables the administrative staff or receptionist to save and retrieve data about blood donors, recipients, and the quantity of blood in the blood bank store's inventory, among other things.

The system checks to see if a specific blood type such as A+, A-, B+, or B- is available. The technology enables the administrator to continue with the procedure if the blood type is accessible. If not, it prompts the administrator to select a different blood type.

For additional blood transactions, the system requests that the administrator enter customer information.

The major goal of this software is to reduce the amount of manual labor and paperwork involved in managing the blood bank while making it simple for the administrative staff and front desk staff to save and retrieve information as needed. The software allows for the addition, modification, or deletion of client data and supports the idea of administrative adjustments.

It would be quite challenging to manually maintain the accuracy and quality of data and supply them in accordance with the amount of data that needs to be managed and accessed. If data were maintained manually, obtaining the necessary information would be next to impossible. A cutting-edge solution that assists in managing massive amounts of blood bank data is the BBMs (Blood Bank Management System). The

Blood Bank management system streamlines manual tasks and permits efficient management of blood transaction activities.

Purpose

The blood bank management system's need for manual data maintenance work will be lessened as a result of this project. This project's main objective is to streamline manual tasks and enable effective administration of blood transaction operations. The project aims to computerize the administrative procedures of a blood transaction in order to provide software that is user-friendly, simple, rapid, and economical. Among other things, data is gathered regarding donors, receivers, and inventory. Previously, it was done manually. The main responsibility of the system is to enter, retrieve, and meaningfully modify these details as required.

- To improve the existing system.
- To develop a scalable system.
- To be highly available

Scope

- Make certain that every aspect of a manual blood bank is covered.
- To guarantee accurate contact information.
- Ensure that the program is straightforward and simple to use.

Advantages of Blood Bank Management System

The following are some benefits of the blood bank donation system:

Because it is client-server based, it may handle numerous administrators.

- It has a simple user interface so that anyone using the system may use it with little to no training and great convenience.
- The admin can automatically remove the registered donors if any incorrect data is entered into the system and deemed invalid.

Implementation

HTML, JSP, and MySQL are used to implement the project (database). Its three-tier architecture is comprised of the Front-End as the Application Layer, the Back-End as the Middle Layer, and the Database. JSP performs input validation. JSP exchanges data with the neighborhood server. HTML code from the server's response is

subsequently shown on the front end. Using a mysql connector, the server talks with MySQL.

A JSP engine, or container, is required by the web server in order to process JSP pages. The task of intercepting requests for JSP pages falls on the JSP container. The Java Server Pages are supported by servers, which are typically referred to as application or web servers. The client browser and a database will be connected through this server. The JSP architecture is depicted in the following diagram.

Client/Server databases with three tiers are often used in web applications. The application server, also known as the web server, is the intermediary layer where the business logic (constraints) component of the application is kept and used to retrieve the appropriate amount of data from the database server. This layer acts as a conduit for transferring partially processed data between the client and the database server. Database architecture is the design, development, implementation, and management of computer programs that store and organize information for organizations, agencies, and institutions. Database architects design and implement software to meet user needs. A variety of databases, including relational and multimedia ones, can be created. Additionally, database programmers can develop databases in a number of languages, such as structured query language (SQL). A relational database's data can be accessed and managed using the database language SQL.

The blood bank administration system is a significant improvement over the conventional method, which calls for a ton of paperwork and physical labor. The procedure is sped up by the system's computerization. This method was thoroughly examined and tested using fictitious data, and it was shown to be very trustworthy. We have created a thorough yet simple system as a consequence, which admins and receptionists may use with minimal training.

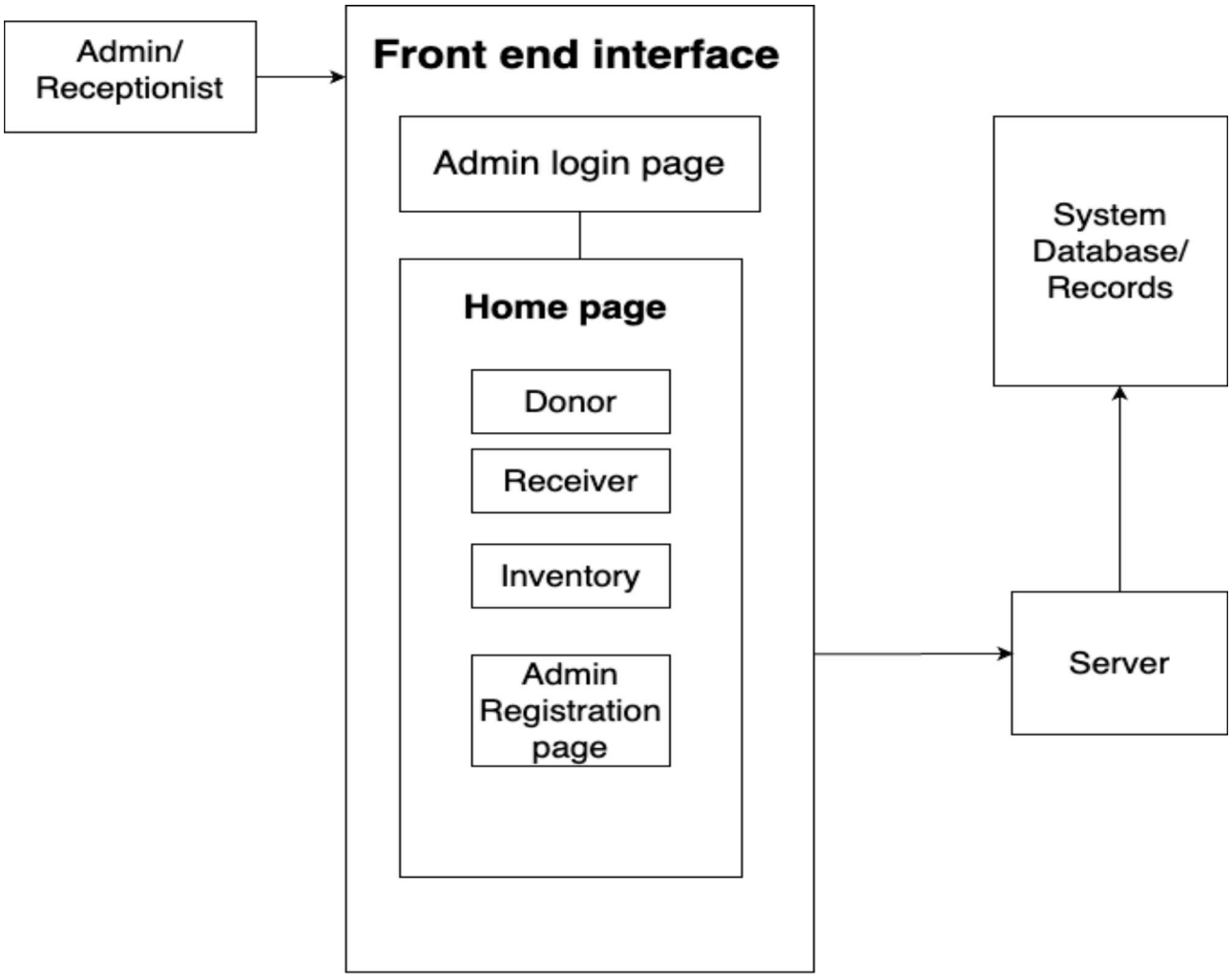
2) Stakeholders:

1. Admin/Receptionist
2. Blood Donation camps
3. Donors
4. Receivers

3) Technologies:

- Technology Implemented : Git, JIRA, Apache Server,TomCat, MySQL Server
- Language Used : JSP
- Database : My SQL
- User Interface Design : HTML
- Web Browser : Google Chrome or any other web-browser

4) Architecture:



5) Architecture Description:

To start with, User navigates to the web application and logs into the admin login page where admin can enter his/her credentials to login. Once logged in, The user can view donor, receiver, inventory and registration options.

- The donor page consists of donor details such as name, blood group, contact information, address etc which the user has to provide manually.
- The receiver page consists of the receiver's contact information.
- In the Inventory page, we can view and manage the blood group quantities.
- The admin registration page can be used to add another admin/user to access the web application.

Once all the details are entered and submitted, the data is stored in a database and updates accordingly in the server.

6) Roadmap:

ROADMAP	Sprint 1		Sprint 2		Sprint 3		Sprint 4		Sprint 5	
	10th Sep	26th Sep	30th Sep	12th Oct	14th Oct	26th Oct	31st Oct	9th Nov	11th Nov	28th Nov
To Do List	Project Report		HomePage		Donor Page		Receivers Page		Inventory Page	
	Architecture Design		Creating db for admin registration details		Creating db for admin registration details		Creating db for admin receiver's details		Creating db for inventory page	
	Road Map		Admin Registration Page		Unit Testing		Acceptance Testing		Testing	
	Creating login webpage		Unit Testing							